C128

```
READY.

10 REM 3-D SURFACE PLOTTER FOR 128
20 REM ORIGINAL PROGRAM FOR THE MICROBEE BY JOHN MC CORMACK
30 REM CONVERSION BY NICHOLAS SCULL
130 PRINT"■";
140 INPUT "HOW MANY LINES RESOLUTION(X-AXIS)":N
150 INPUT "HOW MANY LINES RESOLUTION(Y-AXIS)":M
160 INPUT "WHAT'S THE DOMAIN OF X(MIN,MAX)":X0,X1
170 INPUT "WHAT'S THE DOMAIN OF Y(MIN,MAX)":Y0,Y1
175 INPUT "DO YOU WANT A PRINTOUT(Y,N) ":P$
180 PRINT"■":GRAPHIC1:SCALE1:SCNCLR
200 NO=(X1-X0)/N:MO=(Y1-Y0)/M
210 A=512:B=512
215 A1=2.1799387B:S1=SIN(A1):C1=COS(A1)
220 FOR Y2=Y0 TO Y1 STEP MO
230 FOR X2=X0 TO X1
240 GOSUB 1000
250 GOSUB2000
260 DRAW 1,A+U,B+V/2
270 NEXT X2:NEXT Y2
290 FOR X2=X0 TO X1 STEP NO
300 FOR Y2=Y0 TO Y1
310 GOSUB 1000
320 GOSUB 2000
330 DRAW 1,A+U,B+V/2
340 NEXT Y2:NEXT X2
350 IF P$="Y" THEN GOSUB 60000 ELSE 360
360 GET A$:IF A$="" THEN 360:GRAPHIC0:PRINT"*":END
370 GRAPHIC0:PRINT"*":END
1000 REM THIS GENERATES THE EQUATION
1010 REM
1020 Z2=300/((X2*X2/1000)+ (Y2*Y2/500)+1):Z2=Z2*(-1)
1030 RETURN
2000 REM THIS CONVERTS 3-D INTO PERSPECTIVE 2-D
2010 REM
2020 REM
2030 U1 =X2-Y2*C1
2040 V1 =Z2+Y2*S1
2050 U=INT(U1)
2060 V=INT(V1)
2070 RETURN
60000 SOUND 1,40960,60
60001 GET T$:IF T$=""THEN 60001
60005 SL=8192:REM START OF HI-RES SCREEN
60010 DIMSC(127),A$(25,40):FORI=0TO127:READSC(I):T=T+SC(I):NEXT
60020 IFT<>24512 THEN GRAPHIC0:PRINT"ERROR IN DATA STATEMENTS":STOP
60030 DATA 128,192,160,224,144,208,176,240,136,200,168,232,152,216,184,248,132
60040 DATA 196,164,228,148,212,180,244,140,204,172,236,156,220,188,252,130,194
60050 DATA 162,226,146,210,178,242,138,202,170,234,154,218,186,250,134,198,166
60060 DATA 230,150,214,182,246,142,206,174,238,158,222,190,254,129,193,161,225
60070 DATA 145,209,177,241,137,201,169,233,153,217,185,249,133,197,165,229,149
60080 DATA 213,181,245,141,205,173,237,157,221,189,253,131,195,163,227,147,211
60090 DATA 179,243,139,203,171,235,155,219,187,251,135,199,167,231,151,215,183
60100 DATA 247,143,207,175,239,159,223,191,255
60110 OPEN4,4:FORI=7680+SLTO7992+SLSTEP8:M=(I-7680-SL)/8+1
60120 FORJ=I-7680TOISTEP320:N=(I-J)/320+1:FORK=J+7TOJSTEP-1:X=PEEK(K)
60130 IFX>127THENX=X-64:GOTO60130
60140 IFK=J+7THENA$(N,M)=A$(N,M)+CHR$(SC(XANDPEEK(K-1)+128)):GOTO60160
60150 A$(N,M)=A$(N,M)+CHR$(SC(X))
60160 NEXT:NEXT:FORL=1TO25:PRINT#4,CHR$(8)A$(L,M):NEXT:PRINT#4,CHR$(8):NEXT
60170 PRINT#4:CLOSE4
60180 RETURN
```

3-D Plotter

This is a conversion to C128 basic of a program originally published in the April '84 issue of ETI. The domains of X and Y must be about −300 to 300 at most, and there should be a fairly large number of lines each way, but apart from that, the program is fairly similar apart from the screen dump routine at line 60000 to 60180.

Nicholas Scull
Mount Lawley
WA

VZ 200 300

```
100 REMARKABLE ELECTRONICS TODAY     PROGRAM BY M.ROBERTS 1988...
110 '       (03) 439 2106 ......
120 ' V Z 3 0 0  OR  V Z 2 0 0
130 CLS:PRINT" PROGRAM FROM FEED FORWARD FROM ";
140 PRINT"E L E C T R O N I C S  T O D A Y";
150 PRINT@224,"NAME PLEASE";:INPUTNAME$
160 GOSUB610
170 TIME=1:M=0:H=1:BS=40:CLS
180 CLS
190 E=0:D=29168:E=INT(RND(29)):E=E+28832
200 POKED,30:POKEE-1,35:POKEE,35:POKEE+1,35
210 P=INT(RND(30))
220 P1=INT(RND(30))
230 P2=INT(RND(30))
240 P3=INT(RND(30))
250 IFP1=P2ORP1=PORP1=P3ORP2=PORP3=PORP3=P2,210
260 P=P+29088:P1=P1+29088:P2=P2+29088:P3=P3+29088
270 POKEP1,125:POKEP2,125:POKEP,125:POKEP3,125
280 A$=INKEY$:B$=INKEY$
290 PRINT@10,"BULLETS ";BS
300 IFB$=","ANDD<29183,GOTO400
310 IFB$="M"ANDD>29152,GOTO430
320 IFB$="Z"ANDPEEK(D-64)<>125,SOUND10,1:GOTO460
330 TIME=TIME+1
340 IFTIME>100,910
350 PRINT@22,"TIME"TIME
360 IFB$="Q",END
370 IFB$="R",GOTO170
380 GOSUB560
390 GOTO280
400 REM <-
410 TIME=TIME+1:POKED,96:GOSUB560:D=D+1:POKED,30:GOTO280
420 GOTO280
430 REM ->
440 TIME=TIME+1:POKED,96:GOSUB560:D=D-1:POKED,30:GOTO280
450 GOTO280
460 TIME=TIME+1:R=D:IFBS<1,920
470 BS=BS-1:FORA=1TO3
480 R=R-32:POKER,33:GOSUB560:M=0:POKER,96:NEXT
490 IFPEEK(R-32)=35,H1=H1+1:PRINT@8,H1;" HIT":GOTO510
500 GOTO280
510 SOUND31,1;20,1;10,1
520 IFH1>=10,820
530 REM GOT BULLETS
540 REM
550 GOTO280
560 POKEE-1,96:POKEE+1,96:POKEE,96:IFH=1ANDE<28863,E=E+1
570 IFH=2ANDE>28832,E=E-1
580 IFE=28862,H=2
590 IFE=28833,H=1
600 POKEE+1,35:POKEE,35:RETURN
610 FORA=1TO40:PRINT" STAR FIGHTER ";:NEXT
620 SOUND31,9
630 CLS:FORA=1TO400:NEXT
640 PRINT"  GREETINGS STAR FIGHTER":FORA=1TO800:NEXT
650 PRINT"  I AM YOUR ENEMY ";:FORA=1TO600:NEXT:PRINT"20D"
660 FORA=1TO800:NEXT
670 PRINT" TRY TO DESTROY ME, IF YOU CAN";:FORA=1TO1000:NEXT
680 PRINT"   PRESS":FORA=1TO300:NEXT
690 PRINT"   M FOR <-":FORA=1TO1000:NEXT
700 PRINT"   , FOR ->":FORA=1TO1000:NEXT
710 PRINT"   SPACE FOR FIRE":FORA=1TO1000:NEXT
720 PRINT"   Q TO QUIT":FORA=1TO1000:NEXT
730 PRINT"   R TO RESTART":FORA=1TO1000:NEXT
740 C$=" ANY  KEY"
750 PRINT@448,LEFT$(C$,31);:PRINT@458,LEFT$(C$,31);
760 PRINT@468,LEFT$(C$,31);:PRINTCHR$(28);:PRINT@478,"  ";
770 FORA=1TO30:A$=INKEY$:IFA$<>" ",NEXTELSERETURN
780 C$=MID$(C$,2)+LEFT$(C$,1)
790 GOTO750
800 RETURN
810 A$=INKEY$:A$=INKEY$:IFA$="",810ELSERETURN
820 CLS
830 PRINT:PRINT:PRINT:PRINT
840 PRINT"W   E   L   L       D   O   N   E";
850 PRINT:PRINT:PRINT
860 PRINT"S   T   A   R - F   I   G   H   T   E   R";
870 PRINT:PRINT
880 PRINT"          ";NAME$
890 PRINT:PRINT"    ANY KEY FOR ANOTHE GAME"
900 A$=INKEY$:A$=INKEY$:IFA$="",900
910 RUN
920 CLS
930 PRINT:PRINT:PRINT:PRINT
940 PRINT"B   A   D           L   U   C   K";
950 PRINT:PRINT:PRINT
960 PRINT"S   T   A   R - F   I   G   H   T   E   R";
970 PRINT:PRINT
980 PRINT"          ";NAME$
990 PRINT:PRINT"    ANY KEY FOR ANOTHER GAME"
1000 A$=INKEY$:A$=INKEY$:IFA$="",900
1010 RUN
```

Star fighter

A game where you hit a UFO 10 times under a time and ammunition limit . . . <− (M) (,) −> (Z) FIRE (Q) END (R) RERUN. GOOD LUCK!

Murray Roberts
Eltham
Vic.